

Claims:

1. Fine silica particles having an average particle size of 0.05 to 1 μm , wherein in a measurement of small-angle X-ray scattering, a fractal structure parameter α_1 at length scales ranging from 50 nm to 150 nm and a fractal structure parameter α_2 at length scales ranging from 150 nm to 353 nm satisfy the following formulas (1) and (2):

5 10 $-0.0068S + 2.548 \leq \alpha_1 \leq -0.0068S + 3.748 \quad (1)$

$-0.0011S + 1.158 \leq \alpha_2 \leq -0.0011S + 2.058 \quad (2)$

wherein S is a BET specific surface area (m^2/g) of the fine silica particles,

15 2. Fine silica particles according to claim 1, wherein a concentration of halogen is not larger than 50 ppm.

3. Fine silica particles according to claim 1, wherein a concentration of sodium is not larger than 50 ppm.

20 4. Fine silica particles according to claim 1, wherein surfaces of the silica particles are treated with at least one treating agent from the group consisting of silylating agents, silicone oils, siloxanes, metal alkoxides, fatty acids and metal salts of the fatty acids.

25 5. A filler for a semiconductor-encapsulation resin, comprising the fine silica particles of claim 1.

30 6. A toner additive for electrophotography, comprising the fine silica particles of claim 1.

35 7. An toner additive for electrophotography according to claim 6, wherein surfaces of the silica particles are treated with at least one treating agent from the group consisting of hexamethyldisilazane, dimethyl silicone oils, γ -aminopropyltriethoxysilane

and γ -(2-aminoethyl)aminopropylmethyldimethoxysilane.

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